
NEW NEARCTIC CRANE-FLIES (TIPULIDÆ, DIPTERA).
PART II.*

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This paper is a continuation of the first part under this title (Can. Ent., vol. XLVIII, pp. 42-53, February, 1916). Unless stated otherwise the types of the new species are in the collection of the author.

Family *Tipulidæ*.Subfamily *Limnobiinæ*.Tribe *Limnobiini*.Genus *Dicranomyia* Stephens.***Dicranomyia mel'eicauda*, sp. n.**

Antennæ black throughout; thorax dark brown, the mesonotal stripes very dark brown, wings with the stigma short, oval, very dark brown; abdomen dark brown with the ventral lobes of the male hypopygium light yellow

Male.—Length 5.8-6.7 mm.; wing 6.5-7.6 mm.

Rostrum and palpi black. Antennæ black throughout; segments of the flagellum uniformly oval. Head black with a very sparse, grayish bloom.

Mesonotum dark brown with a golden yellow bloom, most apparent on the lateral margins of the præscutum and the median area of the scutum, præscutal stripes shiny, dark brown, particularly without pollen; scutellum dark brown, postnotum with a dense, yellowish gray bloom. Pleura dark brownish black with a grayish bloom on the posterior sclerites, more golden yellow on the anterior sclerites. Halteres dark brown, the base of the stem more yellowish. Legs with the coxæ brown, sparsely gray pruinose; trochanters and femora dull yellow, the latter soon passing into dark brown; tibiæ and tarsi dark brown. Wings with a slight dusky or grayish tinge; stigma very prominent, oval, dark brown; veins dark brown. Venation: *Sc* short, ending about opposite the origin of the sector; *Sc*₂ rather distant from the tip of *Sc*₁, this distance about equal to the short, oval stigma; *Rs* elongate, arcuated at origin, more than twice the length of the basal deflec-

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tion of R_{4+5} ; basal deflection of Cu_1 at the fork of M ; cell $1st\ M_2$ closed.

Abdomen black, the basal segments indistinctly reddish medially, the caudal margins pale; basal sternites yellowish, the apical segments dark brown. Male hypopygium with the fleshy ventral lobes bright honey-yellow, the remainder of the hypopygium black, in great contrast with these lobes.

Habitat.—Colorado.

Holotype, ♂, Bear Creek, Morrison Co., Colorado; October 20, 1915 (Osler).

Allotype, ♀, with the type.

Paratopotypes, 20 ♂ ♀.

Tribe *Antochini*.

Genus *Antocha* Osten Sacken.

***Antocha monticola*, sp. n.**

Antennae brown; head grayish yellow; thoracic dorsum without stripes.

Male.—Length 5.5 mm.; wing 7.1 mm.

Female.—Length 5–6.4 mm.; wing 7–8 mm.

Rostrum and palpi dark brown. Antennae dark brown with a coarse, white pubescence; flagellar segments rather small, the two or three apical segments longer than those segments immediately before them. Head grayish yellow, with an indistinct, narrow, dark brown median line.

Pronotum dark brown. Mesonotum light brownish yellow without distinct stripes; median area of the praescutum behind more grayish pruinose; scutum light yellow, the median area grayish pruinose; scutellum yellowish white; postnotum brown. Pleura pale grayish yellow. Halteres short, pale yellow, the knobs brown. Legs with the coxae pale yellow; femora yellow, a little darkened apically; tibiae brownish yellow, slightly darker at the extreme tips; tarsi dark brown. Wings whitish opalescent; stigma elongate, indistinct, yellowish; veins pale brown. Venation: cross-vein r present; cell $1st\ M_2$ small; basal deflection of Cu_1 before the fork of M .

Abdomen brownish yellow above, the apical segments darker; hypopygium orange.

Habitat.—Colorado.

Holotype, ♂, Platte Canyon, Colorado; July 17, 1915 (Oslar).

Allotype, ♀, with the type.

Paratopotype, ♀.

Differs from *A. saxicola* O. S. of Eastern North America in the antennal flagellar segments less elongated and paler coloured; head more yellowish, the thorax without stripes, etc.

Tribe *Eriopterini*.

Genus *Ormosia* Rondani.

***Ormosia nimbipennis*, sp. n.**

Coloration reddish brown; wings dusky gray; cell *1st M*₂ of the wings open, the outer deflection of *M*₃ lacking; anal veins convergent.

Male.—Length 4 mm.; wing 5.8–6 mm.

Female.—Length 5.4 mm.; wing 6.3 mm.

Rostrum dull yellow; palpi brown. Antennæ moderately elongate, uniform dark brown throughout. Head brownish gray.

Mesonotum reddish brown without distinct stripes; interspaces with a dense, yellow pilosity; tuberculate pits remote from the anterior margin of præscutum and closely approximated, separated from one another by a distance about equal to one-half the diameter of one; pestnotum with a slight grayish pruinosity. Pleura pale brown with a sparse, gray pruinosity; sternum dull yellow. Halteres pale yellow. Legs with the coxæ and trochanters dull yellow; femora dull yellow, only a little darkened apically; tibiæ and tarsi dark brown. Wings dusky gray; costal region and the stigma brownish; veins dark brown; wing membrane with abundant, short, appressed, black hairs. Venation: cell *1st M*₂ open, the outer deflection of *M*₃ being absent; cross-vein *r* usually a little shorter than the portion of *R*₂ before it; *R*₂₊₃ about equal to the deflection of *R*₄₊₅; petiole of *M*₂ short, less than the basal deflection of *Cu*₁; anal veins convergent.

Abdomen dark brown, the hypopygium a little lighter; hypopygium with the pleural appendages acicular at their apices, black; a prominent median appendage, rectangular, the base and head slightly expanded, the latter squarely truncated or slightly concave across the tip.

Habitat.—Northeastern United States.

Holotype, ♂, Woodworth's Lake, Fulton Co., New York; altitude 1,600 feet; August 13, 1916 (Alexander).

Allotype, ♀, with the type.

Paratopotypes, 10 ♂ ♀.

***Ormosia mesocera*, sp. n.**

Related to *O. monticola* O. S.; antennæ shorter and the flagellar segments not so greatly attenuated; wings more nearly hyaline.

Male.—Length 3.7–3.8 mm.; wing 4.4–4.8 mm.

Rostrum and palpi dark brown. Antennæ dark brown; segments only moderately elongated, not greatly attenuated as in *monticola*; each flagellar segment with a slight, apical, narrowed stem that is equal to about one-half the basal swelling; each segment with abundant rather short hairs and verticils. Head dark brown.

Pronotal scutellum dull, light yellow. Mesonotum reddish with a sparse, gray bloom; thoracic stripes indistinct. Pleura pale brown, very sparsely gray pruinose. Halteres short, the knobs large, pale brown. Legs with the coxæ and trochanters pale yellowish brown; femora dark brown, paler basally; tibiæ and tarsi brown. Wings pale grayish subhyaline, the costal region and stigma more brownish; veins dark brown. Venation: cell 1st M_2 open; anal veins slightly convergent.

Abdomen dark brown, the hypopygium a little more reddish. Hypopygium with the pleural appendages short, blunt, slightly curved.

Habitat.—Northeastern United States.

Holotype, ♂, Simmon's Woods, Gloversville, Fulton Co., New York; altitude 900 feet; June 22, 1916 (Alexander).

Paratopotype, ♂.

Related to *O. monticola* O. S. (Mon. Dipt. N. Am., pt. 4, pp. 145, 146; 1869), but the antennal segments much shorter, the individual segments of the flagellum not greatly attenuated and with the hairs and verticils shorter; no indication of the paler apices to the flagellar segments, and the hypopygial details different.

O. monticola is a late summer species, most abundant in August; *O. mesocera* appears to be more vernal in its appearance on the wing.

***Ormosia megacera*, sp. n.**

Related to *O. divergens* Dietz; antennæ of the male elongated, nodulose; anal veins strongly divergent; body coloration dark brown; appendages of the male hypopygium strongly curved.

Male.—Length 3.3–3.7 mm.; wing 4.8–6 mm.

Rostrum and palpi short, dark brown. Antennæ dark brown; flagellar segments greatly elongated, tapering at both ends, especially apically; hairs and verticils on the segments as long as the segments themselves; whole antennæ nearly as long as the body. Head dark brown.

Pronotum pale whitish. Mesonotal præscutum dark brown with three still darker brown stripes, the median one very broad; scutum brown, the lobes with darker centres; scutellum and postnotum dark brown, sparsely gray pruinose. Pleura and sternum dark brown, rather heavily gray pruinose; dorso-pleural membranes dirty yellow. Halteres dark brown, the extreme base yellowish. Legs with the coxæ pale gray; trochanters and femora pale, the latter darker apically, tibiæ and tarsi dark brown. Wings almost hyaline, but with a faint, gray tinge; costal area a little more suffused; stigma ill-defined; veins dark brown. Venation: cell *1st M*₂ open, the outer deflection of *M*₃ lacking; anal veins strongly divergent; *2nd A* short and straight.

Abdomen dark brown, including the hypopygium; hypopygium with the pleural appendages black, in the form of chitinized hooks that are strongly curved.

Habitat.—Northeastern United States.

Holotype, ♂, Simmon's Woods, Gloversville, Fulton Co., New York; altitude 900 feet; June 22, 1916 (Alexander).

Paratopotypes, 2 ♂'s.

Related to *O. divergens* Dietz (Trans. Am. Ent. Soc., vol. 42, p. 144; 1916) which is reddish brown in colour, and the hypopygium of the male very differently constructed.

Genus *Trimicra* Osten Sacken.

***Trimicra angularis*, sp. n.**

Antennæ black; head yellow with a black median line; præscutum yellow with three dark brown stripes; pleura yellow with two stripes; abdomen yellow with the segments marked with brown; wings gray with sparse brown markings.

Male.—Length 5 mm.; wing 5.2 mm.

Rostrum and palpi brown. Antennæ with the first segment yellowish; remainder of the antennæ dark brownish black, the flagellar segments short-cylindrical. Head broad, light yellow, palest on the front, richer on the vertex and occiput; a dark brown linear mark on the head.

Mesonotal præscutum light yellow, with three very broad, dark brown stripes that are confluent behind, the middle stripe ending before the transverse suture; tuberculate pits at nearly mid-length of the sclerite, rather linear, separated by a distance equal to nearly twice the short diameter of one; scutum light yellow, the lobes largely dark brown, this consisting of two confluent blotches; scutellum light yellow, broadly dark brown medially, broadest anteriorly; postnotum yellowish basally, brown caudally. Pleura yellow with two indistinct and somewhat interrupted lateral stripes, the dorsal one passing above the root of the halteres, the ventral one including the sides of the sternum; sternum yellow, except the sides and a narrow, dark brown, median line on the mesosternum; dorso-pleural membranes dusky. Halteres yellow. Legs with the coxæ and trochanters light yellow; remainder of the legs broken. Wings broad, the anal angle prominent; membrane light gray with small, grayish brown spots as follows: At the origin of *Rs*, at *r*, tip of *R*₁, fork of *Rs*, along the cord and outer end of cell 1st *M*₂; veins dark brown. Venation: *Sc*₂ far removed from the tip of *Sc*₁, lying just distad of the origin of *Rs*; *r* lying far from the tip of *R*₁, this distance equal to about one-half of *Rs*; cell 1st *M*₂ closed, narrowed at its inner end; basal deflection of *Cu*₁ far before the fork of *M*; second anal slightly bisinuate.

Abdominal tergites dull yellow, more brownish basally, a dark brown median blotch on each segment; sternites dull yellow, dark brown medially, the apical segments clearer yellow. Hypopygium with two broad, flattened lobes under the 9th tergite, these heavily chitinized on their dorsal edges; pleurites long, slender, somewhat digitiform; appendages black.

Habitat.—Utah.

Holotype, ♂, mouth of Bear River, Utah; Sept. 16, 1914 (A. Wetmore).

Type in the collection of the United States Biological Survey.

The reference to *Trimicra* is somewhat provisional, although probably correct.

Genus *Rhabdomastix* Skuse.

Subgenus *Sacandaga* Alexander.

***Rhabdomastix flava coloradensis*, subsp. n.**

Allied to *R. flava flava*; antennal flagellum black; pleurae white-pruinose; femora and tibiae tipped with brownish; wings with R_2 almost perpendicular to R_{2+3} ; R_3 almost straight; m very long.

Male.—Length 5.5 mm.; wing 6.9 mm.

Rostrum and palpi brown. Antennae with the first scapal segment yellowish, the remainder of the organ black. Head pinkish gray with a very narrow and indistinct median line of darker.

Pronotum yellowish, a little browner medially, the sides of the scutellum whitish. Mesonotal praescutum dull whitish yellow, dusted sparsely with a grayish pollen, and with three broad, reddish-brown stripes; the broad, middle stripe ends far before the transverse suture and is slightly bifid caudally; scutum with the median area whitish, the outer lateral portions of the lobes dark brown; scutellum bright yellow; postnotum reddish brown, sparsely pruinose. Pleura yellow, more bluish white pruinose on the mesopleurites. Halteres light yellow. Legs with the coxae brownish; trochanters dull yellow; femora light brown, broadly tipped with dark brown; tibiae brown, very narrowly tipped with darker; tarsi brown. Wings opalescent, subhyaline; costal region a little more yellowish; stigma ill-defined, yellowish brown, veins dark brown. Venation: R_2 short, almost perpendicular to R_{2+3} at the fork; cross-vein m very long so that the outer deflection of M_3 is greatly reduced, almost punctiform.

Abdominal tergites brownish yellow; sternites a little brighter.

Habitat.—Colorado.

Holotype, ♂, Platte Canyon, Colorado, July 17, 1915 (Osler).

Close to typical *flava* Alexander of Northeastern America, but sufficiently distinguished by the black antennal flagellum, the mesopleura more whitish pruinose, the femora and tibiae tipped with brown and in the slightly different venational details.

Genus *Crypteria* Bergroth.***Crypteria americana*, sp. n.**

Body coloration reddish, wings subhyaline, the radial cross-vein present.

Female.—Length 5 mm.; wing 6.4 mm.

Rostrum brownish yellow; palpi brown. Antennae dark brown throughout; fusion segment composed of the first five flagellar segments; remaining nine flagellar segments elongate-oval. Head clear, light gray.

Thoracic dorsum reddish with a very sparse whitish bloom; stripes indistinct; a small group of long, black bristles on each side of the pronotal scutum, mesonotal praescutum with a row of similar bristles on each side of the broad median area; scutellum more yellowish. Pleura yellow, with a sparse, bluish bloom on the mesopleurites. Halteres pale, the knobs a little darker. Legs with the coxae and trochanters light yellow; femora light brown, a little brighter basally, tibiae and metatarsi light brown; remainder of tarsi dark brownish black. Wings grayish subhyaline; veins dark brown. Venation: *Sc*₁ elongate, ending just beyond the radial cross-vein; *Sc*₂ removed from the tip of *Sc*₁ to a distance about equal to the basal deflection of *Cu*₁; *Rs* elongate, arcuated; *R*₂₊₃ moderate, a little longer than cell 1st *M*₂; cross-vein *r* present; basal deflection of *R*₄₊₅ short; cross-vein *r-m* long, arcuated, cell 1st *M*₂ elongate, pentagonal; cell *M* very deep, a little longer than its petiole; basal deflection of *Cu*₁ just before the middle of cell 1st *M*₂; second anal vein very elongate, subsinuate, ending about opposite the middle of the long sector.

Abdominal tergites brown; sternites light yellow; valves of the ovipositor elongate, strongly upcurved.

Habitat.—Oregon.

Holotype, ♀, Mt. Angel, Oregon (F. Epper).

Type in the collection of the United States National Museum.

This interesting crane-fly is the first described, New World representative of the genus. It agrees closely with the genotype, *C. limnophiloides* Bergroth of northern Europe, differing in the more reddish body coloration and in certain venational features, especially in the retention of the radial cross-vein.

Tribe *Pedicini*.Genus *Tricyphona* Zetterstedt.***Tricyphona autumnalis*, sp. n.**

Allied to *T. calcar* O. S.; female with the wings semi-atrophied and the valves of the ovipositor straight; male with the hypopygium provided with conspicuous long hairs.

Male.—Length 13.5–15 mm.; wing 13.5–14 mm.

Female.—Length 20 mm.; wing 9.6 mm.

Male.—Rostrum dull yellow, the palpi dark brown. Antennæ with the scapal segments dull, brownish yellow, the five or six basal segments of the flagellum yellowish, thence passing into dark brown at the tip of the organ. Head light gray, indistinctly darker medially, the frontal tubercle blackish; vertex with long yellowish hairs inserted in black punctures.

Mesonotal præscutum yellowish with three indistinct, reddish yellow stripes; scutellum and postnotum whitish yellow. Pleura whitish yellow. Halteres yellow, the knobs brown. Legs with the coxæ and trochanters light yellow; femora yellow, passing into brownish at the tips; tibiæ yellow, narrowly dark brown at the tips; tarsi dark brown. Wings yellowish subhyaline, the costal region more saturate yellow; stigma brown; veins brown. Venation: vein *R*₄₊₅ forked, the petiole very short, subequal to the *r-m* cross-vein.

Abdominal tergites dark brown, a little paler caudally; basal sternites yellowish, terminal sternites brown, the segments narrowly ringed with paler on the caudal margins. Hypopygium with the pleurites and appendages dark brown, densely long-hairy.

Female.—Similar to the ♂ but the antennæ shorter; wings relatively very small, semi-atrophied; femora and tibiæ with the dark apices less distinct; valves of the ovipositor powerful, almost straight.

Habitat.—Northeastern United States and Eastern Canada.

Holotype, ♂, Woodworth's Lake, Fulton Co., New York; altitude 1,600 feet; September 2, 1916 (Alexander).

Allotype, ♀, with the type.

Paratopotypes, 25 ♂ ♀; *paratypes*, ♂, Meach Lake, Quebec, Sept. 2, 1903 (Jas. Fletcher); ♂, Rostrevor, Quebec, Sept. 2, 1907 (A. Gibson); ♂ ♀, Katahdin, Piscataquis Co., Maine, Aug. 22,

1913 (Alexander); ♂, Orono, Penobscot Co., Maine, Aug. 14, 1913 (Alexander); ♀, Roque Bluff, Washington Co., Maine, Aug. 13, 1913 (Morse); ♂ ♀, Ellsworth, Hancock Co., Maine, Aug. 3 to 21, 1913 (Stanwood); ♂ ♀, South Portland, Maine, Sept. 4, 1913 (Alexander); Dug Mt., Hamilton Co., N. Y., Aug. 8, 1912 (Young); Mt. Pinnacle, Fulton Co., N. Y., Aug. 5, 1913 (Alexander); ♂, North Fairhaven, Cayuga Co., N. Y., Sept. 12, 1914 (Alexander); ♂, Grand Island, Erie Co., N. Y., Sept. 6, 1909 (M. C. Van Duzee).

(To be continued.)

BOOK REVIEWS.

BIOLOGIA CENTRALI-AMERICANA. Insecta, Lepidoptera—Heterocera, Vol. IV, Tineina, Pterophorina, Orneodina and Pyralidina and Hepialina (part). By the Right Hon. Lord Walsingham, 1909–1915, London.

Volume IV of the *Biologia Centrali-Americana*, by Lord Walsingham, a most important contribution to our knowledge of the Micro-lepidoptera, has, up to the present time, not been reviewed by any of the entomological journals of the United States or of Canada. This is probably due, not to a failure to appreciate it at its true value, but to the fact that Mr. August Busck, the one best fitted to make the review, of American micro-lepidopterists, assisted in the work of its preparation. The present writer does not intend this to be taken in the sense of a review, but rather as a note of congratulation which may call more general attention to the successful completion of this great work, in which the micro-lepidopterist is more especially interested.

The volume comprises an exhaustive study of the *Tineina*, *Pterophorina* and *Orneodina* of Central America, and includes also a few species of *Pyralidina* and *Hepialina*, as additions to the list given by Mr. H. Druce, in vols. I and II of the *Biologia Centrali-Americana*.

There are listed 1,025 species, 225 genera and 27 families, of which 586 species, 54 genera and 2 families are described as new.

In the majority of instances descriptions of new genera are accompanied by cuts, from drawings made by Mr. J. H. Durrant,